

LATERAL MOTION MEMS SWITCH

ABSTRACT OF THE DISCLOSURE

A micro-electrical-mechanical system (MEMS) switch. The switch includes a compliant spring that supports a contact shuttle for movement in a lateral direction generally parallel to the substrate and biases the contact shuttle to a normally open switch state position. A plurality of moving electrodes are coupled to the contact shuttle. A plurality of fixed electrodes are interleaved with the moving electrodes. The moving electrodes and the fixed electrodes have generally planar major surfaces perpendicular to the plane of the substrate. Electrostatic forces developed between the fixed and moving electrodes cause the contact shuttle to move to a closed switch state position in response to the application of an actuation voltage. The moving direction of the moving electrodes and the contact shuttle is along a longitudinal axis parallel to the substrate and perpendicular to the planar major surfaces of the electrodes.

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